Claims

1.   Method for providing network elements in a communication
system, wherein

- at least partially loaded network elements are determined by
  means of providing a service,
- load thresholds are stipulated for network elements
- on a service provision request, an exceeding of the stipulated
  threshold values connected with a provision of the requested
  service is checked,
- on exceeding of the threshold values, a provision of required
  network elements is initiated.

2.   Method according to Claim 1,
wherein information describing the functional properties and
topological arrangement of network elements relevant to a provision
of a service is stored in a network element database and assigned to
the service.

3.   Method according to Claim 2,
wherein load values of network elements, said load values being
connected with a provision of a service, are stored in the network
element database and the network elements loaded by a provision of a
service are determined by means of these load values.

4.   Method according to any one of Claims 2 or 3,
wherein the load threshold are stored in the network element
database.

5.   Method according to any one of Claims 2 to 4,
wherein information relating to network elements specified by a
service level agreement as relevant to the provision of a service is
stored in the network element database.

6.   Method according to any one of Claims 1 to 5,

wherein loadings of network elements are determined by performance measurements in order to check an exceeding of the stipulated load threshold values.

5   7.   Method according to any one of Claims 1 to 6,
wherein a provision of required network elements is initiated by a work instruction to a network planning and/or network operating system.

10   8.   Method according to any one of Claims 1 to 6,
wherein a provision of required network elements is initiated by an automatic installation of the respective network elements.

       9.   Communication network control and monitoring system having
15   - a communication connection management device which is fashioned such that
              - at least partially loaded network elements are determined by means of a provision of a service,
              - load thresholds are stipulated for network elements,
20   - on a service provision request, an exceeding of the stipulated load threshold values connected with a provision of the requested service is checked,
              - on an exceeding of the threshold values, a provision of required network elements is initiated,
25   - a network element database for storing information describing the functional properties and topological arrangement of network elements relevant to a provision of a service and for assigning this information to the respective service,
       - a service quality monitoring device and/or an error monitoring
30   device for comparing recorded measured values with information stored in the network element database for inadmissible deviations and for generating a message about a service capacity reduction, giving details of the service concerned in the case of an inadmissible deviation.

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10.   Control program for a communication connection management
device of a communication network control and monitoring system
according to Claim 9, said control program being loadable into a
working memory of a data processing system assigned to the
5   communication connection management device and having at least one
code section, on execution of which
- at least partially loaded network elements are determined by
means of a provision of a service,
- load thresholds are stipulated for network elements,
10   - on a service provision request, an exceeding of the stipulated
load threshold values connected with a provision of the requested
service is checked,
-. on an exceeding of the threshold values, a provision of required
network elements is initiated,
15   if the computer program is running in the data processing system.